

Difference Between:

- Scientific paper.**
- Research paper.**
- Essay.**

Scientific Paper

A written and published report describing original research results, have pictures and diagrams, has peer review, and published in a journal within the scientific community.

Research Paper

A research paper is an essay in which you explain what you have learned after exploring your topic in depth. It includes any gathering of data, information and facts for the advancement of knowledge.

Essay

A short piece of writing written from an author's personal point of view, it presents an argument, always needs references, rarely uses graphics.

Research Proposal	Research Report
Describe what the researcher intends to do and why he intends to do it	Describe what the researcher has done, why he has done it, and the results he has achieved.
Written at the beginning and before the research project actually begins	Completed after the completion of the whole research project
Contain sections such as introduction/background, literature review, research questions, methodology, aims and objectives	Contain sections such as introduction/background, literature review, research questions, methodology, aims and objectives, findings, analysis, results, conclusion, recommendations and citations
Shorter in length	Longer than research proposals

Structure of Scientific Paper

☐ Introduction

☐ Body Section

☐ Discussion

Structure of Scientific Paper

☐ Introduction

- ☐ Background contextual information:
 - ☐ What is being investigated.
 - ☐ The significance of your research.
 - ☐ What previous studies have found in this area.
- ☐ Aims and hypothesis.

Structure of Scientific Paper

❑ **Body Section**

- ❑ **Methods:** a precise and concise explanation of what you did. It is important that this is written in such a way that it could be replicated by other researchers.
- ❑ **Results:** present your findings with appropriately and clearly presented graphs, tables, charts, and explanations.

Structure of Scientific Paper

❑ Discussion

- ❑ The discussion is an important section of your report and is often the most challenging to write. This is where you present the analysis of what your findings mean.
- ❑ The final paragraph of your discussion is the conclusion which is a brief summaries of the findings and may reemphasise the key message of your report.

Abstract	Summary
Is a concise summary found at the beginning of a research article	Is a brief statement or account of the main points of a longer work
Is a type of a summary	Can be synopsis, abstract or an executive summary
Should contain the research purpose, methods, results, conclusion and recommendations	Should contain the focal points of the original work

Key Stages in Scientific Writing

- ❑ Define the purpose, title and readership of the report.
- ❑ Design a suitable structure with appropriate headings and sub-headings.
- ❑ Gather all the relevant material and note down the main points under the appropriate headings and subheadings.

Key Stages in Scientific Writing

- ❑ Think about appropriate diagrams to illustrate the text; prepare draft versions of these before starting to write .
- ❑ Write a rough first draft as quickly as possible; it is good idea to do this directly on PCs – writing things out long-hand is time-consuming.

Key Stages in Scientific Writing

- ❑ Write the final version, carefully checking all facts, references, figures, etc.; make sure that the text flows smoothly; check that you have used paragraphs appropriately; check for spelling mistakes; check that you have used correct grammar and punctuation.

Key Stages in Scientific Writing

- ❑ Write an ABSTRACT or EXECUTIVE SUMMARY; this should be done last and should summarize the main issues and conclusions of the report.
- ❑ Get a friend or colleague to read through the report to see how clear and comprehensible it is.